PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

NOTIFICATION OF TRANSMITTAL OF

Attn. Rupert, Wayne One World Trade Center, Suite 1600 121 S.W. Salmon Street Portland, Oregon 97204 UNITED STATES OF AMERICA	THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION
	(PCT Rule 44.1)
	Date of mailing (day/month/year) 12/10/2005
Applicant's or agent's file reference	
4239-6822603	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/US2005/019678	International filing date (day/month/year) 03/06/2005
Applicant	· · · · · · · · · · · · · · · · · · ·
	DOCKETED PURI
THE GOVERNMENT OF THE UNITED STATES OF A	MERICA
The applicant is hereby notified that the international search	COMPLITER WWW
Authority have been established and are transmitted herew Filing of amendments and statement under Article 19: The applicant is entitled, if he so wishes, to amend the clai When? The time limit for filing such amendments is no international Search Report; however, for more Where? Directly to the International Bureau of WiPO, 3 1211 Geneva 20, Switzerland, F For more detailed instructions, see the notes on the acc 2. The applicant is hereby notified that no international search Article 17(2)(a) to that effect and the written opinion of the 3. With regard to the protest against payment of (an) additionable applicant's request to forward the texts of both the protect in a decision has been made yet on the protest; the acceptable and the written opinion of the supplicant's request to forward the texts of both the protect in the protect in the protest; the acceptable and the written opinion of the applicant's request to forward the texts of both the protect in the protec	ims of the International Application (see Rule 46): branching 2 months from the date of transmittal of the e details, see the notes on the accompanying sheet. 34 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 35 companying sheet. 36 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 36 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 37 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 38 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 39 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 39 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 30 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 30 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 30 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 31 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 32 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 33 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 34 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 35 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 36 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 37 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 38 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 39 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 40 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 40 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 40 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 companying sheet. 40 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 chemin des Colombettes Fascimile No.: (41–22) 740.14.35 chemin des Colombettes Fascimile
before the completion of the technical preparations for international The applicant may submit comments on an informal basis on the International Bureau. The International Bureau will send a copy international preliminary examination report has been or is to be the public but not before the expiration of 30 months from the p. Within 19 months from the priority date, but only in respect of sexamination must be filed if the applicant wishes to postpone the date (in some Offices even later); otherwise, the applicant must acts for entry into the national phase before those designated on the international phase before those designated on the second of the designated Offices, the time limit of 30 months. See the Annex to Form PCT/IB/301 and, for details about the actions the second of the second of the designation of the second of the	ne written opinion of the International Searching Authority to the of such comments to all designated Offices unless an elestablished. These comments would also be made available to priority date. Some designated Offices, a demand for international preliminary neighbor entry into the national phase until 30 months from the priority to the priority that the priority date, perform the prescribed Offices. This (or later) will apply even if no demand is filed within 19 applicable time limits, Office by Office, see the PCT Applicant's
Guide, Volume II, National Chapters and the WIPO Internet sit	##.

Name and mailing address of the International Searching Authority

European Patent Office, P.B. 5818 Patentiaan 2 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016

Authorized officer

Gwenaëlle Llorca

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international policition. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the International application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been its filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

- [Where originally there were 48 claims and after amendment of some claims there are 51]:
 "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers;
 claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
- [Where originally there were 15 claims and after amendment of all claims there are 11]: "Claims 1 to 15 replaced by amended claims 1 to 11."
- [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
 "Claims 1 to 6 and 14 unchanged: claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
 - *Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added.* or *Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged.*
- 4. [Where various kinds of amendments are made]: "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international appplication is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's tile reference	FOR FURTHER		see Form PCT/ISA/220
4239-6822603	ACTION	as well a	as, where applicable, Item 5 below.
International application No.	International filing date (day/mont	h/year)	(Earliest) Priority Date (day/month/year)
PCT/US2005/019678	03/06/2005	s.	04/06/2004
Applicant			
THE GOVERNMENT OF THE UNI	TED STATES OF AMERICA		
This international Search Report has bee according to Article 18. A copy is being to	en prepared by this International Sea ransmitted to the International Burea	arching Autho	ority and is transmitted to the applicant
This International Search Report consist	s of a total ofsh	neets.	
X It is also accompanied b	y a copy of each prior art document	cited in this r	report.
Basis of the report			
 With regard to the language, the language in which it was filed, ur 	e international search was carried ou nless otherwise indicated under this	it on the basi Item.	is of the international application in the
The Internationa this Authority (R	I search was carried out on the basisule 23.1(b)).	s of a transla	ation of the international application furnished to
b. With regard to any nucle	eotide and/or amino acid sequenc	e disclosed i	n the international application, see Box No. I.
2. Certain claims were for	und unsearchable (See Box II).		
3. Unity of invention is la	cking (see Box III).		
4. With regard to the title,			
	submitted by the applicant.	,	
the text has been establi	ished by this Authority to read as foll	lows:	
		•	
· ·			
	•		
	•		
5. With regard to the abstract,	•		•
. =	submitted by the applicant.		•
the text has been estable may, within one month f	ished, according to Rule 38.2(b), by rom the date of mailing of this intern	this Authorit ational searc	ty as It appears in Box No. IV. The applicant ch report, submit comments to this Authority.
6. With regard to the drawings,	•		
a. the figure of the drawings to be	published with the abstract is Figure	e No.	
as suggested by			
I = '	his Authority, because the applicant	failed to sug	gest a figure.
I	his Authority, because this figure be		•
b. none of the figures is to	be published with the abstract.		

INTERNATIONAL SEARCH REPORT

International Application No PCT/US2005/019678

_			
A. CLASSIFI	CATION OF SUBJECT MATTER A61K39/385		
•		·	
According to I	international Patent Classification (IPC) or to both national classific	ation and IPC	
B. FIELDS S			
Minimum doc IPC 7	umentation searched (classification system followed by classificat $A61K$	ion symbols)	
	on searched other than minimum documentation to the extent that the state of the extent that the base consulted during the international search (name of data but the consulted during the international search (name of data but the consulted during the international search (name of data but the consulted during the international search (name of data but the consulted during the international search (name of data but the consulted during the international search (name of data but the consulted during the international search (name of data but the consulted during the international search (name of data but the consulted during the international search (name of data but the consulted during the international search (name of data but the consulted during the international search (name of data but the consulted during the international search (name of data but the consulted during the		
EPO-Int	ernal, WPI Data, BIOSIS		
C. DOCUME	NTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the r	elevant passages	Relevant to claim No.
Υ	SCHNEERSON R ET AL: "PREPARATION CHARACTERIZATION, AND IMMUNOGEN! HAEMOPHILES INFLUENZAE TYPE B	ICITY OF	1-16
	POLYSACCHARIDE-PROTEIN CONJUGATE JOURNAL OF EXPERIMENTAL MEDICINE JP, vol. 152, no. 2,	Е, ТОКҮО,	
	1 August 1980 (1980-08-01), page XP000674381 ISSN: 0022-1007 cited in the application	es 301-370,	
	page 363, line 27 - line 33 page 363, lines 36-41	-/	
X Fur	ther documents are listed in the continuation of box C.	X Patent family members are lister	d in annex.
Special categories of cited documents: A* document defining the general state of the art which is not considered to be of particular relevance E* earlier document but published on or after the international filling date I* document which may throw doubts on priority claim(s) or Special categories of cited document published after the international or priority date and not in conflict with the approximate of understand the principle or theory		ternational filing date	
		th the application but	
		not be considered to document is taken alone	
citation of the citation of citation of the citation of citation of citation of citation of citation of citati	which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or cannot be considered to involve an inventive step when the document is combined with one or more other such docu-		
'P' docum	means nent published prior to the international filling date but than the priority date claimed	in the art. *&" document member of the same pate	·
ļ	e actual completion of the international search	Date of mailing of the international s	earch report
	29 September 2005	12/10/2005	·
Name and	I mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk	Authorized officer	
}	Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Luyten, K	

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2005/019678

Category °	ITION) DOCUMENTS CONSIDERED TO BE RELEVANT	15.1	
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
Y	TE PIAO KING ET AL: "PREPARATION OF PROTEIN CONJUGATES VIA INTERMOLECULAR HYDRAZONE LINKAGE" BIOCHEMISTRY, AMERICAN CHEMICAL SOCIETY. EASTON, PA, US, vol. 25, 1986, pages 5774-5779,	1-16	
	XP001015547 ISSN: 0006-2960 cited in the application page 5775, left-hand column, line 27 - line 36 page 5775, right-hand column, line 13 - line 19 page 5775, right-hand column, line 27 -		
A	DEVI S J N ET AL: "CRYPTOCOCCUS-NEOFORMANS SEROTYPE A GLUCURONOXYLOMANNAN PROTEIN CONJUGATE VACCINES SYNTHESIS CHARACTERIZATION AND	1-16	
	IMMUNOGENICITY" INFECTION AND IMMUNITY, vol. 59, no. 10, 1991, pages 3700-3707, XP002346145 ISSN: 0019-9567 abstract		
A	US 4 496 538 A (GORDON ET AL) 29 January 1985 (1985-01-29) examples II-V	1-16	
	·		

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No PCT/US2005/019678

Patent document cited in search report	Publication date		Patent family member(s)	Publication date
US 4496538 A	29-01-1985	AU	561978 B2	21-05-1987
		AU	1822783 A	08-02-1984
		CA	1210695 A1	02-09-1986
		DE	3363505 D1	19-06-1986
		DK	93584 A	23-02-1984
		EP	0098581 A2	18-01-1984
		ES	8500745 A1	01-02-1985
		FI	840874 A	05-03-1984
		ΙE	55268 B1	18-07-1990
·		ΙL	69165 A	30-11-1987
		JP	2097463 C	02-10-1996
		JP	5262668 A	12-10-1993
	•	JP	7121872 B	25-12-1995
	•	JP ·	3047253 B	18-07-1991
· ·		JP	59501360 T	02-08-1984
		KR	8801098 B1	29-06-1988
· ·		NZ	204771 A	06-03-1987
		WO	8400300 A1	02-02-1984
		ZA	8304939 A	29-08-1984

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY WRITTEN OPINION OF THE see form PCT/ISA/220 INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1) Date of mailing (day/month/year) see form PCT/ISA/210 (second sheet) Applicant's or agent's file reference FOR FURTHER ACTION see form PCT/ISA/220 See paragraph 2 below International filing date (day/month/year) Priority date (day/month/year) International application No. 03.06.2005 04.06.2004 PCT/US2005/019678 International Patent Classification (IPC) or both national classification and IPC A61K39/385 Applicant THE GOVERNMENT OF THE UNITED STATES OF AMERICA COMPUTER This opinion contains indications relating to the following items: Box No. I Basis of the opinion ☐ Box No. II **Priority** Non-establishment of opinion with regard to novelty, inventive step and industrial applicability ☐ Box No. III ☐ Box No. IV Lack of unity of invention Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial Box No. V applicability; citations and explanations supporting such statement ☐ Box No. VI Certain documents cited ☐ Box No. VII Certain defects in the international application Box No. VIII Certain observations on the international application **FURTHER ACTION** If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notifed the International Bureau under Rule 66.1 bis(b) that written opinions of this International Searching Authority will not be so considered: If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later. For further options, see Form PCT/ISA/220. For further details, see notes to Form PCT/ISA/220. **Authorized Officer** Name and mailing address of the ISA:

European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx; 31 651 epo nl Fax: +31 70 340 - 3016

Luyten, K

Telephone No. +31 70 340-8924



WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/US2005/019678

			·
В	ox No. I	Basis of the opinion	· · · · · · · · · · · · · · · · · · ·
1. V th	Vith regar ne langua	rd to the language , this opinion has been established on the basis of the internationage in which it was filed, unless otherwise indicated under this item.	nal application in
	langu	opinion has been established on the basis of a translation from the original languag age , which is the language of a translation furnished for the purposes of internater Rules 12.3 and 23.1(b)).	e into the following tional search
2: V n	Vith regar	rd to any nucleotide and/or amino acid sequence disclosed in the international a to the claimed invention, this opinion has been established on the basis of:	pplication and
а	ı. type of	material:	•
	□а	sequence listing	
	□ ta	ble(s) related to the sequence listing	
t	o. format	of material:	
	□ in	written format	
	in	computer readable form	
	c. time of	filing/furnishing:	
	□ с	ontained in the international application as filed.	
	☐ fi	led together with the international application in computer readable form.	
	□ fu	urnished subsequently to this Authority for the purposes of search.	
3.	has copi	ddition, in the case that more than one version or copy of a sequence listing and/or been filed or furnished, the required statements that the information in the subseques is identical to that in the application as filed or does not go beyond the application of the copyriate, were furnished.	Jent or additional
4.	Additiona	al comments:	

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Yes: Claims

1-16

No: Claims

Inventive step (IS)

Yes: Claims

No: Claims

1-16

Industrial applicability (IA)

Yes: Claims

1-16

No: Claims

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

SECTION V

- 1 Reference is made to the following documents:
 - D1: SCHNEERSON R ET AL: "PREPARATION, CHARACTERIZATION, AND IMMUNOGENICITY OF HAEMOPHILUS INFLUENZAE TYPE B POLYSACCHARIDE-PROTEIN CONJUGATES" JOURNAL OF EXPERIMENTAL MEDICINE, TOKYO, JP, vol. 152, no. 2, 1 August 1980 (1980-08-01), pages 361-376, XP000674381 ISSN: 0022-1007 (cited by the applicant)
 - D2: TE PIAO KING ET AL: "PREPARATION OF PROTEIN CONJUGATES VIA INTERMOLECULAR HYDRAZONE LINKAGE" BIOCHEMISTRY, AMERICAN CHEMICAL SOCIETY. EASTON, PA, US, vol. 25, 1986, pages 5774-5779, XP001015547 ISSN: 0006-2960 (cited by the applicant)
- 1.1 Document D1 discloses a method for making an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier, the method comprising: reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier (e.g. bovine serum albumin, hemocyanin, diphtheria toxin) (page 363, lines 27-33); activating a second agent with CNBr, wherein the second agent is a hapten or an antigen (Haemophilus influenzae type b capsular polysaccharide) (page 363, lines 36-39); and reacting the hydrazine-modified first agent with the CNBr-activated second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage (page 363, lines 39-41). The immunogenic conjugates disclosed in document D1 have the following structure: carrier linking group hapten/antigen, whereby the linking group contains a hydrazone and a hydrazo bond.
- 1.2 Document D2 discloses a method for making protein conjugates, the method comprising: reacting a first protein (e.g. ovalbumin) with a hydrazide resulting in a hydrazino-

modified first protein (page 5775, left-hand column, lines 27-36); reacting a second protein (e.g. ovalbumin) with a benzaldehyde compound resulting in a benzaldehyde-modified second protein (page 5775, right-hand column, lines 13-19);

and reacting the hydrazine-modified first protein with the benzaldehyde-modified second protein resulting in a protein conjugate comprising a hydrazone linkage (page 5775, right-hand column, lines 27-38).

- In the method disclosed in document D1 the second agent is activated with CNBr in stead of modification with benzaldehyde as in the method of claim 1. Therefore, the linking group of the immunoconjugates of document D1 does not comprise a benzoylene moiety. In the method disclosed in document D2 a hydrazide is used in stead of a dihydrazide to modify the first agent. Therefore, the linking group of the protein conjugates of document D2 contains a benzoylene moiety and a hydrazone bond, but no hydrazo bond. Thus, the subject-matter of claims 1-16 is novel in the sense of Article 33(2) PCT.
- Though, the present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1-16 does not involve an inventive step in the sense of Article 33(3) PCT for the following reasons.
- 3.1 Document D1 is regarded as being the closest prior art to the subject-matter of claims 1-16.
- 3.2 The subject-matter of claim 1 differs from this known document D1 in that benzaldehyde is used to modify the second agent before linking both agents. Consequently the immunogenic conjugate synthesized according to the method of claim 1 and claimed in claim 8, has a linking group comprising a benzoylene moiety.
- 3.3 The problem to be solved by the present invention may therefore be regarded as providing an alternative method for linking two agents to produce an immunogenic conjugate, wherein the first agent is modified with dihydrazide.
- 3.4 Document D1 discloses a method for making immunogenic conjugates wherein a

dihydrazide is used for linking an antigen or hapten to a carrier. Document D2 discloses a method for making protein conjugates wherein a hydrazide and benzaldehyde are used for linking two proteins. Therefore, the skilled person would, without the need to exercise inventive skill, be aware from document D2 that benzaldehyde can be used for modifying an agent and linking it to an agent with a hydrazino-group to make immunogenic conjugates as claimed in claim 1.

- 3.5 Therefore the solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT).
- 3.6 The same reasoning applies, mutatis mutandis, to the subject-matter of the corresponding independent claim 8, which therefore is also considered not inventive.
- 3.7 Dependent claims 2-7 and 9-16 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step.

SECTION VIII

1 The subject-matter of claims 15 and 16 is not clear, since these entity claims refer to a method claim.